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## SEQUENCE LISTING

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<120> NOVEL ACTIN-RELATED CYTOSKELETAL PROTEIN  
"LACS"

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<160> 2

<170> FastSEQ for Windows Version 4.0

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<211> 3302

<212> PRT

<213> Rattus rattus

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Thr	Gln	Pro	Leu	Asp	Thr	Ile	Lys	Gln	Asp	Ile	Thr	Glu	Ile	Lys	Val
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Ala	Arg	Trp	Leu	Phe	Glu	Thr	Gln	Pro	Leu	Glu	Lys	Ile	Lys	Glu	Glu
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Ser	Lys	Lys	Cys	Trp	Met	Phe	Glu	Thr	Gln	Pro	Leu	Asp	Thr	Leu	Lys
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Asp	Val	Lys	Thr	Thr	Lys	His	Leu	Leu	Glu	Thr	Leu	Pro	Ile	Glu	Ala
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Ile	Phe	Glu	Ser	Asn	Asn	Leu	Ile	Lys	Val	Asp	Ala	Ser	His	Gln	Ile
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Phe	Glu	Thr	Thr	Pro	Leu	Tyr	Ala	Ile	Gln	Asp	His	Leu	Gly	Lys	Tyr
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Pro	Leu	Asp	Ser	Ile	Lys	Tyr	Phe	Ser	Asn	Val	Glu	Glu	Thr	Asp	Ser
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Gly Gly Asn Val Gln Met Asn Lys Gln Leu Phe Glu Ser Glu Gly Gly		
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Asp Lys Lys Asn Tyr Val Arg Thr Val Ser Ile Asn Glu Ile Gln Lys		1200
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Gly Asn Val Lys Thr Ser Thr Trp Leu Phe Glu Thr His Ser Ile Asp		
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Glu Leu Gly Glu Val Ser Thr Tyr Glu Asn Ile Lys Thr Val Thr Gln		
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Asn Gln Thr Leu Asp Ser Ile Lys Glu Leu Asp Glu Ser Asp Thr Lys		
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Ile Thr Lys Glu Glu Ile Pro Pro Ser Asp Val Lys Thr Thr Thr Trp		
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Leu Phe Glu Thr Thr Pro Ile His Glu Phe Asn Glu Thr Arg Ile Glu		
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Lys Glu Glu Ile Ile Gly Lys Ser Ile Lys Glu Thr Leu Glu Asp Leu		
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Tyr Ser Gln Arg Val Val Glu Ala Pro Gly Ile Ile Ile Glu Ala Asp		
1330	1335	1340
Glu Val Gly Asp Val Arg Met Ala Lys Tyr Lys Leu Met Asn Gln Arg		
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Thr Pro Glu Ile Gln Lys Glu Glu Val Ile Arg Ala Asp Leu Gly Asn		
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Ile Met Met Asn Leu Leu Ser Gln Arg Asp Cys Thr Lys Lys Glu Ile		
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Phe Ile Ser Glu Glu Glu Lys Gly Asn Val Asn Phe Thr Lys Thr Gln		
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Leu Leu Asn Arg Ser Met Glu Phe His Ala Glu Lys Glu Glu Ile Val		
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Arg Gly Asp Val Lys Gln Ala Ile Gln Lys Leu Phe Ser Glu Glu Arg		
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Cys Ala Lys Arg Gly Ile Leu Ile Gln Glu Asp Glu Lys Gly Asp Val		
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Asn Met Thr Ile Tyr Cys Leu Leu His Glu Asn Ala Gly Asp Lys Thr		
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Lys Arg Glu Asp Ile Leu Gly Gly Asp Val Arg Arg Thr Ile His Asn		
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Leu Leu Ser Ser Ala Ser Asn Asp Lys Ile Ser Glu Arg Thr Lys Ile		
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Asp Ala Ser Glu Arg Gly Asn Val Gln Phe Phe Thr Thr Cys Ile Glu		
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Thr Gly Ala Leu Asp Tyr Leu Lys Gln Leu Gln Thr Gly Ser Asn Glu		
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Thr Leu Thr Ala Arg Lys Gln Glu Gly Glu Glu Ile Ile Gly Gly		
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Asp Val Glu Gly Thr Lys Phe Leu Leu Lys Lys Arg Gln Ser Ser Ile		
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Glu Arg Thr Val Ser Glu Thr Asp Ile Ile Pro Gly Asp Val Arg Asn		
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Thr Val Lys Val Phe Met Thr Glu Pro Gln Ser Ala Ser Phe Lys Thr		
1585	1590	1595
		1600

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Ser	Leu	Lys	Glu	Gln	Tyr	Ser	Phe	Lys	Glu	Val	Gly	Lys	Gln	Gly			
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His	Pro	Ala	Ala	Val	Gln	Arg	Glu	Lys	Lys	Ser	Leu	Leu	Gln	Pro	Val		
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Arg	Thr	Glu	Ala	Asn	Leu	Pro	Lys	Ala	Pro	Lys	Gly	Thr	Val	Lys	Ile		
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Val	Ile	Asp	Arg	Glu	Gln	Asn	Asn	Asp	Ala	Leu	Glu	Lys	Ser	Leu	Arg		
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Lys	Met	Ser	Asn	Ser	Glu	His	Arg	Ala	Met	Lys	Asn	Val	Leu	Asp	Met		
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Asp	Asp	His	Met	Ser	Lys	Tyr	Val	Ser	Ala	Ser	Met	Ser	Arg	Lys	Lys		
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Met	Lys	Thr	Asn	Thr	Ser	Lys	Glu	Leu	Lys	Met	Ala	Met	Glu	Arg	Ser		
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Phe	Asn	Pro	Val	Asn	Leu	Tyr	Pro	Asp	Cys	Gly	Val	Lys	Glu	Asn	Glu		
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Asp	Ala	Leu	Pro	Pro	Pro	Ser	Pro	Pro	Pro	Pro	Pro	Pro	Ser	Asn	Ala		

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Ser Ser Glu Ile Glu Phe Pro Leu Pro Pro Pro Pro Pro Ile Met Leu		
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Leu Pro Glu Lys Asn Glu Phe Pro Pro Ser Ser Pro Thr Glu Lys Ser		2080
2085	2090	2095
Arg Ala Glu Leu Glu Ser Leu Pro Thr Leu Pro Leu Pro Pro Pro Pro		
2100	2105	2110
Gly Asp Glu Lys Ser Asp Gln Glu Cys Leu Pro Thr Ser Leu Pro Pro		
2115	2120	2125
Pro Pro Pro Thr Ala Pro Ser Gln Pro Ala His Leu Leu Ser Ser Ser		
2130	2135	2140
Val Leu Glu His His Ser Glu Ala Phe Leu Gln Tyr Ser Arg Lys		
2145	2150	2155
Glu Thr Leu Asp Ser His Gln Leu His Ser Gln Ala Lys Ile Leu Thr		
2165	2170	2175
Gly Lys Ser Pro Pro Pro Thr Leu Pro Lys Pro Lys Leu Pro Glu Arg		
2180	2185	2190
Ile Lys Ala Lys Met Ser Gln Asp Ser Pro Ser Gly Glu Leu Glu Arg		
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Ser Leu Ser Asp Val Glu Ile Lys Thr Thr Leu Ser Lys Asp Gln Lys		
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Ser Ser Leu Val Ala Glu Ser Arg Glu His Thr Glu Ala Lys Gln Glu		
2225	2230	2235
Val Phe Arg Lys Ser Leu Gly Arg Lys Gln Leu Ser Ile Ser Ser Ala		
2245	2250	2255
Asn Ser Leu Ser Gln Thr Val Pro Glu Ile Pro Ala Pro Lys Glu Lys		
2260	2265	2270
Gln Thr Ala Pro Leu Val Lys Ser His Ser Phe Pro Ser Gly Ser Glu		
2275	2280	2285
Gln Gln Ser Pro Lys Pro Tyr Met Arg Lys Phe Lys Thr Pro Leu Met		
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Ile Ala Glu Glu Lys Tyr Arg Gln Gln Arg Glu Glu Leu Glu Lys Gln		
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Arg Arg Glu Ser Ser Cys His Ser Ile Ile Lys Thr Glu Thr Gln His		
2325	2330	2335
Arg Ser Leu Ser Glu Lys Glu Lys Glu Thr Glu Leu Gln Lys Ala Ala		
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Glu Ala Met Ser Thr Pro Arg Lys Asp Ser Asp Phe Thr Arg Ala Gln		
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Pro Asn Leu Glu Pro Lys Ser Lys Ala Val Ile Ala Ser Glu Cys Ser		
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Glu Ser Gln Leu Ser Thr Ala Ser Ala Leu Thr Val Ala Thr Glu Arg		
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Leu Gln His Val Leu Ala Ala Ser Asp Asp Lys Leu Thr Leu Arg Arg		
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Glu Gly Thr Gln Asn Ser Ser Asp Thr Leu Gln Ser Lys Thr Ala Cys		
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Glu Ile Asn Gln Ser His Lys Glu Cys Arg Thr Glu Gln Thr Phe Glu		
2435	2440	2445
Gln His Val Glu Lys Leu Pro Phe Pro Gln Thr Lys Pro Ile Ser Pro		
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Ser Phe Lys Val Lys Thr Ile Arg Leu Pro Ala Leu Asp His Thr Leu		
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2500	2505	2510

Glu Val Ser Thr Gln Cys Asp Asn Lys Gln Ser Val Ala Glu Lys Tyr	2515	2520	2525
Phe Gln Leu Pro Lys Thr Glu Lys Arg Val Thr Val Gln Met Pro Lys	2530	2535	2540
Asp Tyr Ala Ala Lys Ser His Gln Ser Lys Leu Gln Thr Val Pro Lys	2545	2550	2555
Lys His Gly Gly Leu Gly Glu Phe Asp Arg Gly Asn Val Leu Gly Arg	2565	2570	2575
Glu Gly Lys Asn Gln Asp Ser Ser Met Ser Ser Thr Lys Glu Ser Arg	2580	2585	2590
Val Ile Val Glu Arg Lys Gln Glu His Leu Gln Asp Gln Ser Val Pro	2595	2600	2605
Arg Leu Val Gln Gln Lys Ile Ile Gly Glu Ser Leu Asp Ser Arg Val	2610	2615	2620
Gln Asn Phe Gln Gln Thr Gln Thr Gln Thr Ser Arg Ile Glu His Lys	2625	2630	2635
Glu Leu Ser Gln Pro Tyr Ser Glu Lys Lys Cys Leu Arg Asp Lys Asp	2645	2650	2655
Lys Gln Gln Lys Gln Val Ser Ser Asn Thr Asp Asp Ser Lys Gln Glu	2660	2665	2670
Ile Thr Gln Lys Gln Ser Ser Phe Ser Ser Val Arg Glu Ser Gln Gln	2675	2680	2685
Asp Gly Glu Lys Cys Ala Ile Asn Ile Leu Glu Phe Leu Arg Lys Arg	2690	2695	2700
Glu Glu Leu Gln Gln Ile Leu Ser Arg Val Lys Gln Phe Glu Ala Asp	2705	2710	2715
Ser Asn Lys Ser Gly Leu Lys Thr Phe Gln Thr Leu Leu Asn Ile Ala	2725	2730	2735
Pro Val Trp Leu Ile Ser Glu Glu Lys Arg Glu Tyr Gly Val Arg Val	2740	2745	2750
Ala Met Glu Asn Asn Leu Glu Lys Val Lys Glu Glu Ile Ile His Ile	2755	2760	2765
Lys Thr Gln Ala Glu Glu Met Leu Val His Cys Glu His Val Ile Arg	2770	2775	2780
Thr Ala Met Met Ala Ser Gln Thr Gly Lys Gln Lys Asp Lys Pro Thr	2785	2790	2795
Asn Leu Asn Glu Met Pro Leu Lys Val Ser Asn Val Asn Leu Ser Ser	2805	2810	2815
His Lys Gly Thr Glu Gln Lys Glu Ser Lys Ile Val Glu Glu Lys Leu	2820	2825	2830
Ala Ser Arg Gln Val Ala Thr His Ser Glu Ala Ala Thr His Asn Pro	2835	2840	2845
Ala Lys Thr Tyr Gln Glu Ala Lys Gly Asp Asp Ser Lys Met Ala Pro	2850	2855	2860
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